

Conference Abstract

A Framework for Wetlands' Ecological Integrity Assessment in Rwanda

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Abstract

Wetland's Ecological Integrity Assessment refers to "an assessment approaches that measures overall wetland condition with an emphasis on the structure, composition, and function of an ecosystem in reference to a natural habitat of the region" It provides government agencies, and key stakeholders with critical information on factors that may be degrading, maintaining or helping to restore an ecosystem, therefore supporting decision making. With continued degradation of protected areas over the last four decades, wetland ecosystems served as soft edges for biodiversity and genetic resources in Rwanda. However, there is no holistic framework to assess the ecological integrity of these important ecosystems, and the little and incomplete information collected is scattered, hence difficult to access. Consequently, wetlands are under continued overexploitation, reclamation pollution, biodiversity and ecological functions loss (Singh et al. 2015). Throughout a six months period, with a participatory planning process that involved individual expert consultations and workshops, supported with a robust literature review and the established multidisciplinary technical team, we came up with a holistic and Integrated Framework for Wetlands' Ecological Integrity Assessemnt. The framework is cost-effective and was designed to collect and analyse data on the structure (soil, hydrology), composition (biota), and functions (Ecosystem services mapping and valuation) as well as the social economy status within and around wetland landscapes in the region. In addition, the ARCOS Biodiversity Information Management System ([ARBIMS](#)), an online platform for data sharing, was developed and upgraded. The developed assessment

framework will help to mobilize and integrate biodiversity data into relevant documents to inform wetland management plans and support other investment decisions in Rwanda.

Keywords

biodiversity, ecological integrity, assessment framework, decision making, ecosystem services

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